10 marks

END OF QUESTION AND ANSWER BOOK

CSE CENTRE FOR STRATEGIC EDUCATION
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| STUDENT: | TEACHER: |
|---|---|

# CSE TEST – MAY 2011

# YEAR 12 PSYCHOLOGY

## Written test 1

**Reading time: 15 minutes**
**Writing time: 1 hour 30 minutes**

## QUESTION AND ANSWER BOOK

**Structure of book**

| *Section* | *Area of Study* | *Number of questions* | *Number of questions to be answered* | *Number of marks* |
|---|---|---|---|---|
| A | 1. Mind, Brain and Body<br>2. Memory | 45 | 45 | 45 |
| B | 1. Mind, Brain and Body<br>2. Memory | 14 | 14 | 45 |
| | | | | Total 90 |

- Students are permitted to bring into the test room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are **NOT** permitted to bring into the test room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this test.

**Materials**

- Question and answer book of 18 pages.
- Answer sheet for multiple choice questions.

**Instructions**

- Write your **name** in the space provided above **and** on the multiple choice answer sheet.
- Answer all questions in the spaces provided.
- All written responses must be in English.

**At the end of the test**

- Place the answer sheet for multiple choice questions inside the front cover of this book.

**Students are NOT permitted to bring mobile phones and/or other unauthorised electronic communication devices into the test room.**

## SECTION A – Multiple choice questions

**Instructions for Section A**

Answer all questions in pencil on the answer sheet provided for multiple choice questions.

Choose the response that is correct or that best answers the question.

A correct answer scores 1, an incorrect answer scores 0.

Marks will not be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

**Question 1**

A similarity between William James and René Descartes' theories of consciousness is that both

A. believe that consciousness can be likened to a stream because it is continuously moving and changing.

B. believe that consciousness is located in the pineal gland.

C. believe that consciousness includes everything we are aware of at any given moment.

D. both created the theory of dualism.

**Question 2**

Jarom has entered a deep state of relaxation known as meditation. This is likely to produce

A. a lowered heart rate.

B. a significant increase in body temperature.

C. an increased Galvanic Skin Response (GSR).

D. beta brainwaves.

**Question 3**

One limitation of video monitoring as a measurement of sleep is

A. participants may give false or misleading responses.

B. no information is obtained about internal physiological functioning.

C. participants may be camera shy and unable to have a normal night's sleep.

D. participants may be uncomfortable due to the wires attached to their body.

**Question 4**

The approximate percentage of time spent in NREM sleep for the average adult is

A. 80%.

B. 20%.

C. 50%.

D. 30%.



**Question 5**

One limitation of the survival theory of sleep is that

A. people who are physically disabled and confined to a bed require the same amount of sleep as those who are physically active.

B. people are less likely to attract the attention of predators when they are asleep.

C. the loss of conscious awareness of external stimuli when asleep puts the organism at greater risk.

D. those who sleep longer do not necessarily live to an older age compared with those who sleep less.

**Question 6**

John has a simple job labelling cans in a factory. He has been given the opportunity to work bonus hours and consequently has not slept for several days. He is most likely to

A. continue working effectively as the task is not difficult.

B. label the cans as efficiently as usual but not listen as carefully to instructions.

C. make more mistakes than usual when labelling the cans.

D. work faster than usual as he is concentrating more because he knows he is tired.

**Question 7**

Shannon is participating in a sleep study testing the effect REM sleep deprivation. Each time she enters a stage of REM sleep she is woken, however she is allowed to sleep through all NREM stages. When allowed uninterrupted sleep she is likely to

A. go through the typical NREM/REM cycle of sleep.

B. spend more time in NREM than usual.

C. spend more time in REM than usual.

D. sleep longer than her usual eight hours.

**Question 8**

Which one of the following factors does not contribute to the adolescent sleep-wake cycle shift?

A. The hormone melatonin, which is responsible for making adolescents feel sleepy, is not released for an extra two hours compared with their childhood patterns.

B. Independence, for example, around decisions such as bed time.

C. Social development activities at night and early school times in the morning.

D. An increased appetite to cater for growth and development.

**Question 9**

One difference between an elderly person's and an infant's need for sleep is

A. an infant spends more time in REM sleep.

B. an elderly person spends more time in REM sleep.

C. an infant spends more time in NREM sleep.

D. an elderly person spends more time in stages 3 and 4 NREM sleep.

**Question 10**

When people experience total sleep deprivation, they frequently experience a microsleep. Physiological signs of a microsleep would include

A. delta EEG brainwave patterns.

B. beta EEG brainwave patterns.

C. alpha and theta EEG brainwave patterns.

D. droopy eyelids.

**Question 11**

Kara suffers a terrifying car accident and goes into a state of panic. The attending ambulance officers record an extremely high heart rate. Which branch of her peripheral nervous system has brought about the increase in her heart rate?

A. Autonomic

B. Somatic

C. Parasympathetic

D. Sympathetic

**Question 12**

A function of the association area in the parietal lobe is

A. receiving sensory information from the sensory receptors in the skin and body.

B. complex mental functioning such as judging, planning and reasoning.

C. receiving and integrating information from other lobes to determine the body's position in space.

D. receiving and integrating information from other lobes to form and create and retrieve memories.

**Question 13**

Bob is driving through the countryside and is startled when he observes a wombat in the middle of the road. Which part of his central nervous system would be responsible for directing his attention to the wombat?

A. Primary Visual Cortex.

B. Reticular Activating System.

C. Primary Auditory Cortex.

D. Primary Motor Cortex.

**Question 14**

When the reticular formation is severed from the rest of the brain in cats, a likely consequence would be that the cats would

A. be in a constant state of alertness.

B. fall in to a prolonged coma.

C. be able to function as normal.

D. not be able to direct their attention and filter out irrelevant information.



**Question 15**

Which of the following scenarios involving the thalamus is most likely to be correct?

A. During sleep, the thalamus allows the sensory information to pass to the brain.

B. Electrical stimulation of the thalamus may produce the sensation of sight.

C. Injury to the thalamus could prevent auditory information from being processed in the cortex.

D. The thalamus receives inputs from the nose regarding the sense of smell and sends it to the cortex.

**Question 16**

Frank suffered a stroke and has been diagnosed with Wernicke's Aphasia. What is his likely prognosis?

A. He will be unable to articulate speech.

B. He will have difficulties producing the correct sounds required for speech.

C. He will have difficulty locating the correct words from memory to produce meaningful sentences.

D. He will be limited to the use of nouns and verbs.

**Question 17**

Due to severe epileptic seizures, Annie elected to undergo a split-brain procedure which involved severing her corpus callosum. After the procedure, when an object is flashed into her left visual field she is

A. unable to verbalise what she has seen.

B. able to verbalise what she has seen.

C. able to reach out and touch the object with her right hand.

D. unable to reach out and touch the object with her left hand.

**Question 18**

If you stared at waterfall for a prolonged period of time and then shifted your attention to the nearby stationary rocks, the likely outcome is that the rocks would appear

A. to be moving upwards.

B. to be moving downwards.

C. to be stationary.

D. to vanish.

**Question 19**

Which of the following situations would most likely be described as change-blindness in an observer?

A. A person viewing a visual stimulus notices a change in the coloured background of a scene.

B. A person viewing a visual stimulus notices a change in the outfit of the person to whom they are talking.

C. A person viewing a visual stimulus fails to detect a change in the stimulus.

D. The retina detects a change in the stimulus due to interruption.

**Question 20**

In Penfield's pioneering studies, he applied a small electrode to stimulate different areas of the brain. When stimulating the temporal lobe, a likely response in the patient would be to

A. see flickering lights.

B. hear doorbells.

C. feel pain in the brain.

D. experience a reflex in the arm.

**Question 21**

Which of the following is not a limitation of Transcranial Magnetic Stimulation (TMS)?

A. It is invasive.

B. It has been known to induce epileptic seizures in some patients.

C. The magnetic field only affects the part of the brain that lies immediately below the skull.

D. No long term effects of repeated stimulation have been established.

**Question 22**

Doctor Van Winkle, a neurosurgeon, frequently uses brain research devices to identify abnormalities in patient's brains. She is currently using a device that provides images of the brain 'at work' through tracking the blood flow around the brain. Prior to this procedure, her patients are injected with a harmless radioactive substance. Which device is she using?

A. Computerised Tomography.

B. Magnetic Resonance Imaging.

C. Functional Magnetic Resonance Imaging.

D. Positron Emission Tomography.

**Question 23**

What is the advantage of a Single Photon Emission Computed Tomography (SPECT) over Positron Emission Tomography (PET).

A. The radioactive tracers have longer decay time in SPECT compared to PET.

B. The image is functional in SPECT whereas it is purely anatomical in PET.

C. The image in SPECT is of a higher resolution than in PET.

D. The radioactive substance is less harmful in SPECT compared to PET.

**Question 24**

When Taryn undertakes a particularly difficult series of steps in her ballet performance her motor movements are conducted by which division of her peripheral nervous system?

A. Autonomic Nervous System

B. Sympathetic Nervous System

C. Somatic Nervous System

D. Primary Motor Cortex



**Question 25**

The sea slug, Aplysia, was used in memory experiments by Eric Kandel because

A. its central nervous system is similar in structure to that of humans.

B. it has 20 000 neurons which is the same number as humans.

C. it has some of the largest neurons in the animal kingdom which can be easily studied experimentally.

D. it only has one neuron so it can be easily studied experimentally.

**Question 26**

The well known case study of H.M, which involved the removal of the hippocampus, resulted in

A. an inability to create new, explicit memories.

B. an inability to retrieve semantic memories.

C. an inability to retrieve procedural memories.

D. personality changes.

**Question 27**

When playing football, Andrew becomes unconscious from a hard knock to the head. When he recovers he cannot remember anything that happened five minutes before he was knocked. A failure in _____ best describes why Andrew cannot recall this information.

A. the central executive

B. consolidation

C. his tip-of-the-tongue ability

D. procedural memory

**Question 28**

Violet is 85 years old and has begun experiencing difficulties with her short term memory. One example of a task that she would find difficult is

A. remembering the names of her childhood friends.

B. remembering the name of the school to which she went.

C. simple mathematical calculations.

D. deciding whether or not to enter a roundabout while driving a car.

**Question 29**

_____ affects memory for information experienced before the person sustains brain damage; whereas _____ affects memory for information experienced after the person sustains damage to the brain.

A. retrograde amnesia; anterograde amnesia

B. anterograde amnesia; retrograde amnesia

C. anterograde amnesia; retroactive interference

D. retroactive amnesia; anterograde amnesia

**Question 30**

In the early stages of Alzheimer's disease what sort of information is most likely to be unaffected?

A. Recall of past events, such as their 21st birthday.

B. Everyday skills, such as cooking and dressing.

C. Where the person has placed items in their home.

D. Use of the correct word when talking.

**Question 31**

Which definition below best describes Dementia?

A. A general term for a variety of symptoms related to occasional memory loss

B. A general term for a variety of symptoms related to aging and forgetfulness.

C. A general term for a variety of symptoms, of a large group of neurodegenerative diseases, which cause a rapid decline in mental functioning.

D. A general term for a variety of symptoms, of a large group of neurodegenerative diseases, which cause a progressive decline in mental functioning.

**Question 32**

A researcher investigated two different memory procedures, using two groups of 10 participants. Both groups were shown a series of 15 unrelated words at the rate of one per second. Group 1 was then asked to write down as many of the words presented immediately after being shown the list. Group 2 was asked to write down as many words as they could remember after a delay of 30 seconds. The results showed that

A. Group 1 was able to recall more words from the end of the list than Group 2 due the Recency Effect.

B. Group 1 were able to recall more words from the end of the list than Group 2 due the Primacy Effect.

C. neither group could recall any of the words, as they had not been consolidated.

D. both groups could recall the first five words and last five words due to the Serial-Position Effect.

**Question 33**

Chunking is a useful way of enhancing memory through increasing the

A. period of time information is in long term memory.

B. period of time information is in short term memory.

C. capacity of short term memory.

D. capacity of long term memory.



**Question 34**

Sarah has no trouble remembering how to play the piano even after a couple of months without practice. However, she has great difficulty in remembering definitions of concepts in psychology unless she reviews them regularly. Which of the following statements best explains the difference in her performance between the two tasks?

A. Declarative memory is being used when remembering how to play the piano. This is more automatic than procedural memory, which is used when she is trying to remember concepts.

B. Procedural memory is being used when remembering how to play the piano. This is more automatic than declarative memory, which is used when she is trying to remember concepts.

C. Semantic memory is being used when remembering how to play the piano. This information is easier to retain than declarative memory, which is being used to remember the concepts.

D. Episodic memory is being used when remembering how to play the piano. This information is easier to retain than semantic memory which is being used to remember concepts.

**Question 35**

Forty participants have enrolled in an experiment on memory. Ten participants were in each condition. Each participant learned a list of words on Day 1. In Condition 1 they used Semantic Encoding, Condition 2 used Acoustic Encoding, Condition 3 used Visual Encoding and Condition 4 used Chunking. On Day 2 they were asked to recognise the words they had learned from a list of incorrect alternatives. According to Craik and Lockhart's framework, which level of processing would result in more effective recognition?

A. Semantic Encoding

B. Acoustic Encoding

C. Visual Encoding

D. Chunking

**Question 36**

Colin can recall very well what happened in the football game last week and the scores from games many years ago; however, he cannot recall in detail what happened during his experiences in World War II because he has been consciously attempting to forget this for many years. This is strong evidence for which explanation of forgetting?

A. Motivated forgetting

B. Repression

C. Suppression

D. Retrieval failure

**Question 37**

Ebbinghaus' early studies on forgetting noted that most material is forgotten

A. initially after learning.

B. at a steady rate for the first year after learning.

C. between eight and 24 hours after learning.

D. slowly at first, but rapidly from five days after learning.

**Question 38**

Which of the following is the most sensitive measure of retention?

A. Free recall.
B. Recognition.
C. Relearning.
D. Serial Recall.

**Question 39**

In attempting to help Diana to remember something that happened to her six months ago, a psychologist encourages her to recreate the same physiological and psychological conditions she was experiencing at the time the event happened. Through this process the psychologist is helping Diana to use _____ to remember the event.

A. semantic-dependent cues
B. procedural cues
C. state-dependent cues
D. context dependent cues

**Question 40**

Nada divides the population up into groups based on age. Each person within their age group has an equal chance of being selected for the sample. The sample has the same age group proportions as in the population. This type of sampling is most accurately known as

A. random sampling.
B. stratified sampling.
C. convenience sampling.
D. stratified random sampling.

**Question 41**

One benefit of using the repeated measures research design over the independent groups design is that it

A. introduces order effects such as fatigue, boredom and practice.
B. is quick and easy.
C. controls for participant attrition
D. controls for differences in participant characteristics between groups

**Question 42**

A psychologist conducts research into a new brain scanning technique that has the potential to reveal important new information about brain function. However, this technique has a potential risk associated with exposure to chemicals; the impact of the chemicals on people is largely unknown. In weighing up the risks and benefits associated with this study which ethical issue would an ethics committee consider?

A. Beneficence
B. Integrity
C. Justice
D. Respect for persons



**Question 43**

Using rhymes, such as 'one is a bun' and 'two is a shoe', to remember a list of words is an example of which mnemonic device?

A. Acrostic
B. Acronym
C. Narrative chaining
D. Peg-Word Method

**Question 44**

Two students witnessed a car accident. The police officer asked the first student: 'About how fast were the cars going when they *smashed* into each other?' He then asked the second student: 'About how fast were the cars going when they *hit* each other?' What would be likely differences in their account of the accident?

A. Student 2 would be more likely to report a faster speed than Student 1.
B. Student 1 would be more likely to report a faster speed than Student 2.
C. The students would provide a similar response in their report of the speed.
D. The incident was so traumatic that neither student would be unable to report on the likely speed of the cars.

**Question 45**

An operational hypothesis states

A. How the variables being studied will be observed, manipulated and measured.
B. The details of the sample to be tested.
C. The details of the population of research interest.
D. Both A and C

## SECTION B – Short and extended answer questions

**Instructions for Section B**

Answer all questions in the spaces provided.

**Question 1**

Yasmine wants to learn Spanish. She has just bought herself a new language CD and plans to listen to it in the car in order to teach herself Spanish; however, she has also just obtained her driver's licence. Yasmine's mum thinks that it is dangerous for Yasmine to drive and listen to the Spanish CD. In terms of attention and processing, do you agree or disagree with her? Why?

**2 marks**

**Question 2**

Give an example of an altered state of consciousness and identify **two** psychological characteristics that could distinguish this example from normal waking consciousness.

**3 marks**

**Question 3**

Chelsea has volunteered to take part in a sleep study. She spends the night in a sleep laboratory

a. Chelsea's electroencephalograph (EEG) and electrooculargraph (EOG) recordings are monitored during the night. Describe the distinct EEG and EOG recordings that determine Chelsea is in REM sleep.

**2 marks**



b. Chelsea also completes a sleep diary for the weeks leading up to the night in the laboratory. Give one limitation of using sleep diary as a method to study sleep.

**1 mark**

**Question 4**

Provide **one** cognitive and **one** behavioural function of the left cerebral hemisphere.

**2 marks**

**Question 5**

a. Which parts of the body would have the greatest space devoted to them in the somatosensory cortex of the brain?

**1 mark**

b. Explain **why** this is so.

**1 mark**

**Question 6**

Lee's teacher asks her a question in class. Lee thinks about the question and then gives her answer. Using psychological terms, explain the role the temporal and frontal lobes play in Lee's answering of the question.

**4 marks**

**Question 7**

People who suffer from spatial neglect do not usually acknowledge the existence of the left half of their body and environment.

**a.** According to the results of a CT or MRI scan, in which lobe and hemisphere would you expect to see significant change and damage?

**1 mark**

**b.** Compared to a MRI, what is a limitation of a CT scan?

**1 mark**

**Question 8**

Explain the role of iconic memory in assisting us to perceive the world around us as continuous rather than a series of disconnected visual images.

**2 marks**

**Question 9**

Give **two** differences and **two** similarities between the 'sensory memory' and the 'long term memory'.

**4 marks**



**Question 10**

When Baddeley proposed the first model of the working memory it had three components. Baddeley and Hitch have since revised this model and added a fourth component. This is because they felt the original model did not fully explain how working memory actually links with LTM. Name and describe the role of the fourth component of the working memory.

**2 marks**

**Question 11**

Ling is currently completing his VCE. When he tries to write down all the students who were in his Grade 1 class at primary school he finds he cannot remember them all.

**a.** According to retrieval failure theory, explain why Ling cannot remember all the students in his class.

**1 mark**

**b.** Interference theory proposes that the memories have been altered or confused in some way. Explain how retroactive interference may have occurred and resulted in Ling not being able to remember all the students in his class.

**1 mark**

**c.** Decay theory proposes that the memories have faded over time through disuse. Outline one criticism of decay theory.

**1 mark**

**d.** To what memory system may decay theory be better suited?

**1 mark**

**Question 12**

Tilly wants to buy a DVD. Her friend tells her a list of shops she thinks might stock this DVD. Tilly does not have a pen and paper so she repeats the shop names over and over to herself.

**a.** What type of rehearsal is Tilly using?

**1 mark**

**b.** Name a mnemonic technique that Tilly could use to increase her chances of being able to remember the shop names when she gets home. Explain how she could apply this technique to the information given.

**2 marks**

**Question 13**

According to the semantic network theory, how is information stored in long-term memory? How would a context cue aid in the retrieval of information in a semantic network?

**2 marks**

**Question 14 – Extended Question**

Write a report for the following study. Your report should include:

- a research hypothesis for the study
- an appraisal of any confounding variables
- a summary of the significance or otherwise of the findings
- a discussion of any ethical issues that may have been raised
- a brief conclusion about the study and whether we can generalise these conclusions

**Study**

Ms Mary Mac believes that the deeper her students process information then the better the recall. She believes this to be the case for all students in VCE.

In investigating the effect of the level of processing on memory, Ms Mac asked the 60 females in her three Year 12 Psychology classes, at Black Secondary College, to participate in a study. Students were offered an extra revision session prior to their examinations if they agreed to participate in the study. They all agreed and prior to the study gave informed consent.

**Procedure**

All students were asked to memorise a list of 20 three letter words (such as 'dog'). They were then tested on their recall of the terms. Each class was given a different level of processing to use. Each class was then asked a question or given a task about each of the words as follows:

**Class 1:** shallow processing – 'Is the word in capital letters?'

**Class 2:** moderate processing – 'Think of another word that rhymes with this word.'

**Class 3:** deep processing – 'Make up a sentence with this word in it.'

Twenty-four hours later, all participants returned. They were tested by a research assistant on their recall of the words. Ms Mac was not aware of the level of processing to which each class was exposed. Participants were debriefed after the study.



**Results**

The mean number of words recalled for each of the three classes was calculated. The results are shown in the table below.

| Class | Mean number of words recalled |
|---|---|
| 1. | 10 |
| 2. | 15 |
| 3. | 19 |

The researcher set a level of significance at 0.05. A statistical analysis yielded $p = 0.02$.

Examples of acceptable explanations:

- narrative chaining: Tilly takes the shop names and creates a story out of the words
- method of loci: Tilly pictures (visualises) the shop names located at specific positions on a well-known journey or in a well-known location, so that she can re-visit these places in her imagination and allow the locations to cue the images.

**Question 13 (2 marks)**

Each concept (node) is linked to other related nodes in a hierarchical manner. Students must mention: hierarchical structure; nodes and links. (1 mark)

The context cue would activate nodes in the semantic network which would then activate further nodes of related information through the links. (1 mark)

**Question 14 (10 marks)**

- ***a research hypothesis for the study:*** for example, ' VCE students who use the deep level of processing will have a higher recall of the 20 three letter words than VCE students who use the shallow level of processing' (3 marks).

  To receive the full three marks students must:
  - identify the population as VCE students
  - have operationalised the IV as the level of processing (were asked to create a sentence with their word in it versus were asked to say whether their words were in capitals or not)
  - have operationalised the DV as recall of 20 three letter words

- ***an appraisal of any confounding variables*** (2 marks)
  - convenient sample: not representative of the population
  - independent groups design: participant confounding variables are not eliminated
  - three letter words: may attached prior experience

- ***a summary of the significance or otherwise of the findings*** (1 mark)

  The results were statistically significant. The probability was less than 5 in 100 that the results were due to chance.

- ***a discussion of any ethical issues that may have been raised*** (2 marks)
  - Ms Mac should have asked for parental consent for her students as some of them would have been under 18 years old – informed consent
  - Ms Mac coerced her students into participating in the experiment by offering an incentive – voluntary participation

- ***a brief conclusion about the study and whether we can generalise these conclusions*** (2 marks)
  - when we process information deeply we are more likely to recall it because we have elaborated on the information and encoded it semantically
  - we must be cautious about generalising our conclusions because our sample is limited (all female, Year 12 students from Black Secondary College, studying Psychology)

CSE CENTRE FOR STRATEGIC EDUCATION
*Leading educational thinking and practice*

IARTV

# CSE TEST – MAY 2011

# YEAR 12 PSYCHOLOGY

## Written test 1

# ANSWERS & SOLUTIONS BOOK

## SECTION A – Multiple choice questions (45 marks)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | C | 10 | C | 19 | C | 28 | D | 37 | A |
| 2 | A | 11 | D | 20 | B | 29 | A | 38 | C |
| 3 | B | 12 | C | 21 | A | 30 | B | 39 | C |
| 4 | A | 13 | B | 22 | D | 31 | D | 40 | D |
| 5 | C | 14 | B | 23 | A | 32 | A | 41 | D |
| 6 | C | 15 | C | 24 | C | 33 | C | 42 | A |
| 7 | C | 16 | C | 25 | C | 34 | B | 43 | D |
| 8 | D | 17 | A | 26 | A | 35 | A | 44 | B |
| 9 | A | 18 | A | 27 | B | 36 | C | 45 | D |

## SECTION B – Short and extended answer questions (45 marks)

**Question 1 (2 marks)**

Driving requires concentration and selective attention (controlled process); driving and talking on the phone will require divided attention.

**Question 2 (3 marks)**

Any two of the following:

- Sleep/dreaming/daydreaming- thought patterns are illogical and disorganised, perception of time is distorted, lack of control of movements, sensations and perceptions are dulled, memory is impaired or not processed
- Meditative induced state - sensations or perceptions are dulled (less sensitive to pain), perception of time is distorted, we become less aware of our environment
- Hypnosis- perception of time is distorted, sensations or perceptions are dulled (less sensitive to pain), we can increase self control (for example, quitting smoking), we are more open to suggestibility
- Drug induced state- thought processes are illogical or disorganised, sensations or perceptions are dulled or heightened, memory is impaired or not processes (blackouts), we become more or less emotional, perception of time is distorted, lack of control of our body movement or our inhibitions are reduced

**Question 3 (2 + 1 + 3 marks)**

**a.** Both of the following:
- EEG: beta-like brainwaves (high frequency/low amplitude)
- EOG: high electrical activity in the muscles that move the eyes

**b.** People may give false or misleading information in order to give a favourable impression of themselves.

**Question 4 (2 marks)**

Any of the following:
- cognitive – verbal tasks (for example speech production and comprehension, reading, writing), analytical tasks (for example, mathematical problems), sequential tasks, evaluating, logical reasoning
- behavioural – control of voluntary movement from the right side of the body, receiving and processing sensations from the right side of the body, speech production

**Question 5 (1 + 1 = 2 marks)**

**a.** Hands/fingers/thumbs **and** face/lips/tongue/mouth/eyes.

**b.** More sensitive, used more for sensation, more sensory receptors (NOT more dexterity) (1 mark)



**Question 6 (4 marks)**

The sensory receptors in Lee's ear relay the sensation of the sound through the spinal cord to the primary auditory cortex in the temporal lobe. The information is then transferred from the auditory cortex to Wernicke's area for comprehension. When Lee then thinks about questions and decides on an answer, this decision is made in the frontal lobe – association cortex. The information travels to Broca's area in the left frontal lobe to produce an articulate answer and then is transmitted to the primary motor cortex, which sends neural impulses to the skeletal muscles her mouth, larynx and tongue to provide the answer to the teacher.

**Question 7 (1 + 1 = 2 marks)**

**a.** Parietal lobe of the right hemisphere.

**b.** Any of the following:
- the CT image is not as detailed or as clear as an MRI image.
- the CT scan is black and white whereas an MRI scan is in colour – there is better contrast in an MRI.
- the CT scan uses powerful X-rays and cannot be repeated within several months as there is a high risk of cancer.
- the CT scan requires an injection of iodine to provide contrast – this is an invasive technique.

**Question 8 (2 marks)**

Both of the following:
- the iconic memory stores visual information for 0.2-0.4 seconds and this is long enough for each impression to slightly overlap the next.
- because each new image is registered in the iconic memory before the previous image fades, we can link one visual image with the next image we see so that we perceive the world around us as continuous rather than a series of disconnected visual images.

**Question 9 (4 marks)**

Two similarities include:
- both have only one entry point (from the senses and from the STM)
- both have an unlimited capacity

Two differences include:
- SM has a short duration of 0.2-4.0 seconds and the LTM has a long duration (potentially forever)
- SM does not encode or organise information whereas the LTM organises and encodes information semantically

**Question 10 (2 marks)**

**Name:** the episodic buffer.

**Role:** the episodic buffer provides temporary storage of representations that incorporate phonological, visual and spatial information (and possibly data not covered in other slave systems, for example, music). It binds information into meaningful units with time sequencing, such as the memory of a story or a movie scene.

**Question 11 (1 + 1 + 1 + 1 = 4 marks)**

**a.** Ling does not have the right cues to prompt his memory, for example, photos.

**b.** In retroactive interference, new information interferes with the ability to recall **old** information so any students who have been in his class after he was in Grade 1 (for example, Grade 2 classmates) have interfered with his memory of the Grade 1 students.

**c.** We sometimes have vivid memories of things that we have not thought about for a long time

**OR**

We can access some old memories with cues or prompts. This rejects the idea that memories fade when we do not use them.

**d.** STM

**Question 12 (1 + 2 = 3 marks)**

**a.** Maintenance

**b.** Any one of the following: narrative chaining; method of loci; peg word method; acronym; acrostic; rhyming.